

$$\begin{cases} 4x^2 - y^2 + 12 = 0 \\ x + y = 3 \end{cases}$$

Solution:

$$y = 3 - x$$

$$4x^2 - (3 - x)^2 + 12 = 0$$

$$4x^2 - 9 + 6x - x^2 + 12 = 0$$

$$3x^2 + 6x + 3 = 0$$

$$3(x^2 + 2x + 1) = 0$$

$$(x + 1)^2 = 0$$

$$x = -1$$

$$y = 3 - (-1) = 4$$

Answer:

$$\mathbf{x = -1; y = 4}$$